

CONSERVATION EFFECTS WORKSHEET

Benchmark Management System			
Name	Address	Resource Setting	Resource Problems Before Treatment
Mined Land RMS – All MLRAs	Pitt County	Open sand pit on Alaga soil in Pitt County on Tar River floodplain	Rill and gully erosion from unstabilized cut and fill slopes.
Benchmark (Present Management System): Leave Mined Area ungraded and unseeded upon completion of mining.			

Effects of Continuing the Benchmark System			
Actions – Present Management	Effects of Continuing the Benchmark System		
Mined area abandoned without treatment	<ul style="list-style-type: none"> ▪ Soil eroding into pit and adjacent floodplain ▪ Water quality (turbidity) negatively impacted downstream after each rain ▪ Soil exposed to wind erosion ▪ Sterile graded area has little plant cover except near waterline ▪ No habitat for upland wildlife. Abandoned pit fills with water 4 feet deep during winter and spring months providing some wetland wildlife and waterfowl habitat values. 		

Treatment Options			
Name	Address	Treatment Option Number	Description of Treatment Option
Mined Land RMS – All MLRAs	Pitt County	1	Grading abandoned mine, seeding, planting wildlife food and shelter plants, and fencing around deep part of pit for safety.
Actions – Proposed Management	Effects of conservation treatment		
342 – Critical Area Planting 382 – Fencing 466 – Land Smoothing 543 – Land Reconstruction – Abandoned Mined Land 590 – Nutrient Management 645 – Upland Wildlife Habitat Management	<ul style="list-style-type: none"> ▪ Erosion on cut and fill slopes and soil areas stabilized ▪ Access to pit area controlled ▪ Cut and fill areas are graded back to stable side slopes ▪ Good ground cover established ▪ Some barren areas vegetated with food and shelter plants for wildlife ▪ Nutrients applied at rates that will be utilized by plants ▪ Low maintenance cost 		
Impacts			
	<ul style="list-style-type: none"> ▪ Turbidity of water in pit and runoff water reduced ▪ Safety hazard reduced ▪ Plant cover established on entire area resulting in improved water quality. Air quality improved because blowing soil has been stabilized ▪ Increased wildlife habitat carrying capacity ▪ Increased opportunity for hunting ▪ Improved conditions for plant growth and establishment without nutrient pollution of water 		

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Benchmark Management System			
Name	Address	Resource Setting	Resource Problems Before Treatment
Other Land RMS – MLRA 136	Catawba County	40 acres - Urban Development	All vegetation stripped, no temporary measures installed.
Benchmark (Present Management System): Leave bare while awaiting development			
Actions – Present Management		Effects of Continuing the Benchmark System	
March – Strip away vegetation and smooth out surface		<ul style="list-style-type: none"> ▪ Excessive sheet and rill, ephemeral gully, and classic gully erosion ▪ Serious clogging of culverts and ditches with sediment ▪ Water quality problems from suspended sediments and bedload ▪ Impaired aquatic habitat in adjacent streams ▪ Air quality not affected ▪ Rapid runoff contributes to local flooding 	

Treatment Options			
Name	Address	Treatment Option Number	Description of Treatment Option
Other Land RMS – MLRA 136	Catawba County	1	Establishment of vegetation and engineering techniques.
Actions – Proposed Management		Effects of conservation treatment	
342 – Critical Area Planting 350 – Sediment Basin 362 – Diversion 587 – Structure for Water Control 590 – Nutrient Management		<ul style="list-style-type: none"> ▪ Soil erosion control ▪ Water conveyances protected from additional sedimentation ▪ Air quality not affected ▪ Runoff rates and volumes are controlled 	
			Impacts
			<ul style="list-style-type: none"> ▪ Water quality improved ▪ Aquatic habitat restored naturally ▪ Visual effects improved ▪ Local flooding not aggravated.
Comments:			

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Benchmark Management System			
Name	Address	Resource Setting	Resource Problems Before Treatment
Cropland AMS – Slat Belt of MLRA 136	North Carolina Piedmont	Shallow soils with high K values and T values of 1 and 2.	
Benchmark (Present Management System): Continued production of row crops in response to market			Effects of Continuing the Benchmark System
Actions – Present Management			
<ul style="list-style-type: none"> ▪ Continuous production of one crop on the same field until the market dictates otherwise ▪ Conventional tillage up and down slope farming of entire field 			<ul style="list-style-type: none"> ▪ Extremely high soil loss. Sedimentation of adjacent streams ▪ Additional input of fertilizer to maintain yields ▪ Poor moisture retention ▪ Insect and disease problems ▪ Minimum wildlife food and habitat values

Treatment Options			
Name	Address	Treatment Option Number	Description of Treatment Option
Cropland AMS – Slat Belt of MLRA 136	North Carolina Piedmont		
Actions – Proposed Management			Effects of conservation treatment
<u>Option I</u>	<ul style="list-style-type: none"> ▪ Reduced soil loss, but still above “T” ▪ Improved moisture retention ▪ Improved infiltration of rainfall ▪ Fewer diseases and insects ▪ Sediment and nutrient retention at field edge ▪ Increased yields ▪ Improved wildlife food and habitat values 		
	<ul style="list-style-type: none"> ▪ Long term soil productivity extended ▪ Yields increased by 20 percent ▪ Water quality improved ▪ Profit margin increased by 15 percent ▪ Hunting success for doves, quail, and other small game improved 		
	<u>Option II</u> <ul style="list-style-type: none"> ▪ Reduced Soil Loss ▪ Improved moisture retention ▪ Improved infiltration of rainfall ▪ Fewer diseases and insects ▪ Sediment and nutrient retention at field edge ▪ Increased yields ▪ Improved wildlife food and habitat values ▪ Improved soil tilth 		
	<ul style="list-style-type: none"> ▪ Long term soil productivity extended ▪ Yields increased by 20 percent ▪ Water quality improved ▪ Profit margin increased by 15 percent ▪ Hunting success for doves, quail, and other small game improved 		
	328 – Conservation Crop Rotation		
	329A – Residue Management, No-till & Strip Till		
330A – Cross Slope Farming			
344 – Crop Residue Use			
386 – Field Border			
328 – Conservation Crop Rotation (including sod-based rotation)			
330A – Cross Slope Farming			
344 – Crop Residue Use			
386 – Field Border			